

Amendments to the Claims

The following listing of the claims will replace all prior versions, and listings of the claims in the application:

Listing of Claims

1. (Previously presented) A transmission apparatus for video information characterized by having:
 - an input part for inputting video information transmitted by a central processing unit;
 - a level information generation part for generating level information of each pixel on a screen based on at least said video information;
 - a memory part for storing the level information of each pixel in the entire region of the screen;
 - a region extraction part for extracting a changed region which is a region on the screen including pixels related to said video information;
 - an update region level information generation part for generating level information of each pixel in said changed region based on, at least, either the level information of each pixel generated by said level information generation part or the level information of each pixel stored in said memory part;
 - a compression part for compressing the information amount of level information of each pixel in said changed region; and
 - a communication part for transmitting position information of said changed region and said compressed level information.

2. (Previously presented) The transmission apparatus for video information according to claim 1 characterized in that said update region level information generation part generates differential information of the level information of each pixel in said changed region extracted based on, at least, the level information of each pixel generated by said level information generation part and the level information of each pixel stored in said memory part and said compression part compresses the differential information.

3. (Previously presented) The transmission apparatus for video information according to claim 1, characterized in that said changed region is a region in a rectangular form including pixels of m rows and n columns (m, n are positive integers of 1 or more, respectively).

4. (Previously presented) The transmission apparatus for video information according to claim 3, characterized in that said changed region is a set of pixels wherein the upper i bits of the row address (in the case that the row address is assumed to be data of h bits. i is a positive integer satisfying $1 < i < (h-1)$) and the upper j bits of the column address (in the case that the column address is assumed to be data of k bits, j is a positive integer satisfying $1 < j < (k-1)$) of each pixel on the screen are the same.

5. (Previously presented) The transmission apparatus for video information according to claim 1, characterized in that said communication part is a wireless communication part.

6. (Previously presented) The transmission apparatus for video information according to claim 1, characterized, in addition, in that:

said memory part outputs level information of each pixel in the entire region of the screen to said update region level information generation part at least once or more, for every constant period of time;

said compression part compresses the information amount of the level information of each pixel in said entire region of the screen: and

said communication part transmits identification information for identifying said compressed level information of the entire region of the screen from said compressed level information of the changed region or from compressed differential information of the changed region as well as said compressed level information of the entire region of the screen.

7. (Previously presented) A transmission system for video information characterized by having:

a first terminal apparatus including a central processing unit and a transmission

apparatus for video information according to claim 1; and

a second terminal apparatus, which is a terminal apparatus according to claim 19.

8. (Previously presented) A transmission system for video information

characterized by having:

a first terminal apparatus including a central processing unit and a transmission apparatus for video information according to claim 2; and

a second terminal apparatus which is a terminal apparatus according to claim 20.

9. (Previously presented) The transmission system for video information

according to claim 7, characterized in that said communication parts of said first terminal apparatus and said second terminal apparatus are wireless communication parts, respectively.

10. (Previously presented) A transmission method for video information,

characterized by the steps of:

inputting video information transmitted by a central processing unit;

generating level information of each pixel on a screen based on, at least, said video information;

storing said level information of each pixel in a memory part;

extracting a changed region which is a region of the screen including pixels related to said video information;

generating level information of each pixel in said changed region of the screen based on, at least, either the level information of each pixel generated in said level information generation step or the level information of each pixel stored in said memory step;

compressing the information amount of the level information of each pixel in said changed region; and

transmitting position information of said changed region and said compressed level information.

11. (Previously presented) The transmission method for video information

according to claim 10, characterized in that:

the update region level information generation step generates differential information of level information of each pixel in said changed region extracted based on, the level information of each pixel generated in said level information generation step and the level information of each pixel stored in a memory and the compression step compresses the differential information.

12. (Previously presented) The transmission method for video information according to claim 10, characterized in that said changed region is a rectangular region including pixels of m rows and n columns (m, n are positive integers of 1 or more, respectively).

13. (Currently amended) The transmission method for video information according to claim 12[.], characterized in that said changed region is a set of pixels wherein the upper i bits of the row address (in the case that the row address is assumed to be data of h bits, i is a positive integer satisfying $l < i < (h-1)$) and the upper j bits of the column address (in the case that the column address is assumed to be data of k bits, j is a positive integer satisfying $l < j < (k-l)$) of each pixel on the screen are the same.

14. (Previously presented) The transmission method for video information according to claim 10, characterized in that information are transmitted by means of a wireless communication in said transmission step.

15. (Previously presented) The transmission method for video information according to claim 10, further characterized by:

reading out level information of each pixel in the entire region of the screen from said memory part with a frequency of at least once or more for a constant period of time;

compressing the information amount of the level information of each pixel in the entire region of the screen; and

transmitting identification information for identifying said compressed level information of the entire region of the screen from said compressed level information of the changed region or from compressed differential information of the changed region and said compressed level information of the entire region of the screen.

16. (Previously presented) A transmission method for video information characterized by having:
each step of the transmission method for video information according to claim 10; and each step of the transmission method for video information according to claim 22.

17. (Previously presented) A transmission method for video information characterized by having:
each step of the transmission method for video information according to claim 11; and each step of the transmission method for video information according to claim 23.

18. (Previously presented) The transmission method for video information according to claim 16, characterized in that said transmission step and said reception step are implemented by means of a wireless communication.

19. (Previously presented) A terminal apparatus for video information characterized by having:
a communication part for receiving position information of a changed region and compressed level information of each pixel in said changed region which are transmitted by a transmission apparatus for video information according to claim 1;
an expansion part for expanding said compressed level information and outputting level information of each pixel in said changed region ;
a memory part for storing level information of each pixel in the entire region of the screen and for storing the level information of each pixel outputted by said expansion part in accordance with the position information of said changed region ; and
a display part for displaying a screen in accordance with the level information of each pixel stored in said memory part.

20. (Currently amended) The terminal apparatus for video information according to

claim 19 further having:

a level information updating part for updating the level information of each pixel stored in said memory part; characterized in that

the communication part receives compressed differential information which is a compressed difference of the level information of each pixel in said changed region and transmitted by a transmission apparatus for video information ~~according to claim 2~~;

the expansion part expands said compressed differential information and generates differential information of the level information of each pixel in said changed region ; and

the level information updating part updates the level information of each pixel stored in said memory part based on the position information of the changed region received by said communication part, the differential information of the level information of each pixel generated by said expansion part and the level information of each pixel stored in said memory part, wherein said update region level information generation part generates differential information of the level information of each pixel in said changed region extracted, based on, at least, the level information of each pixel generated by said level information generation part and the level information of each pixel stored in said memory part, and said compression part compresses the differential information.

21. (Previously presented) The terminal apparatus for video information according to claim 19, characterized in that said communication part is a wireless communication part.

22. (Previously presented) A transmission method for video information characterized by having:

a communication step for receiving position information of a changed region and compressed level information of each pixel in said changed region which are transmitted by a transmission method for video information according to claim 10;

an expansion step for expanding said compressed level information and outputting level information of each pixel in said changed region;

a memory step for storing the level information of each pixel outputted in said expansion step in a memory part in accordance with the position information of said changed

region; and

a display step for displaying a screen in accordance with the level information of each pixel stored in said memory part.

23. (Currently amended) The transmission method for video information according to claim 22 further having:

a level information updating step for updating level information of each pixel stored in a memory part, characterized in that the ~~a~~ communication step receives compressed differential information which is a compressed difference of the level information of each pixel in said changed region and transmitted by a transmission method for video information ~~according to claim 11,~~

the expansion step expands said compressed differential information and generating differential information of the level information of each pixel in said changed region, and

the level information updating step updates level information of each pixel stored in a memory part based on the position information of the changed region received in said communication step, the differential information of the level information of each pixel generated in said expansion step and the level information of each pixel stored in said memory step wherein the update region level information generation step generates differential information of level information of each pixel in said changed region extracted, based on, the level information of each pixel generated in said level information generation step and the level information of each pixel stored in a memory, and the compression step compresses the differential information.

24. (Previously presented) The transmission method for video information according to claim 22, characterized in that said communication step is a wireless communication step.